

wherein,

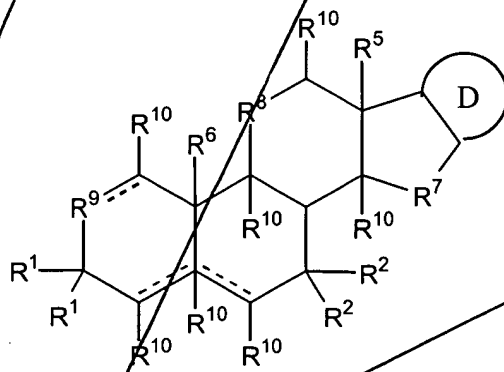
$R^1$  independently are  $-OH$ ,  $-OR^{PR}$ ,  $=O$ ,  $-SH$ ,  $-SR^{PR}$ ,  $=S$ ,  $=N-OH$ ,  $-N(R^{PR})_2$ ,  $-O-Si-(R^{13})_3$ ,  $-CHO$ ,  $-CHS$ ,  $=CH_2$ ,  $-CH=NH$ ,  $-CN$ ,  $-SCN$ ,  $-NO_2$ ,  $-OSO_3H$ ,  $-OPO_3H$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer;

$R^2$  independently are  $-OH$ ,  $-OR^{PR}$ ,  $=O$ ,  $-SH$ ,  $-SR^{PR}$ ,  $=S$ ,  $=N-OH$ ,  $-N(R^{PR})_2$ ,  $-CHO$ ,  $-CHS$ ,  $=CH_2$ ,  $-CH=NH$ ,  $-CN$ ,  $-SCN$ ,  $-NO_2$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, a substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety or an optionally substituted heterocycle;

$R^3$  independently are  $-H$ ,  $-OH$ ,  $-OR^{PR}$ ,  $=O$ ,  $-SH$ ,  $-SR^{PR}$ ,  $=S$ ,  $=N-OH$ ,  $-N(R^{PR})_2$ ,  $-O-Si-(R^{13})_3$ ,  $-CHO$ ,  $-CHS$ ,  $=CH_2$ ,  $=CH(CH_2)_{0-15}CH_3$ ,  $-CH=NH$ ,  $-CN$ ,  $-SCN$ ,  $-NO_2$ ,  $-OSO_3H$ ,  $-OPO_3H$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an

optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle or a spiro ring;

each  $R^4$  independently are -H, -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, a thioacyl group, a carbonate, a carbamate, a thioacetal, an alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide, a polymer, or all  $R^3$  and  $R^4$  together comprise a compound having the formula



$R^5$  and  $R^6$  independently are -H, -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group or an optionally substituted alkynyl group;

$R^{10}$  independently are -H, -OH, -OR<sup>PR</sup>, =O, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, =CH<sub>2</sub>, =CH(CH<sub>2</sub>)<sub>0-15</sub>CH<sub>3</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate

ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide, a polymer, or one or more of two adjacent  $R^1$ - $R^6$  and  $R^{10}$  comprise an independently selected ketal or thioacetal;

$R^7$  is  $-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2-C(R^{10})_2$ -,  $-C(R^{10})_2-O-C(R^{10})_2$ -,  $-C(R^{10})_2-S-C(R^{10})_2$ -,  $-C(R^{10})_2-NR^{PR}-C(R^{10})_2$ -,  $-O$ -,  $-O-C(R^{10})_2$ -,  $-S$ -,  $-S-C(R^{10})_2$ -,  $-NR^{PR}$ - or  $-NR^{PR}-C(R^{10})_2$ ;

$R^8$  and  $R^9$  independently are  $-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2$ -,  $-O$ -,  $-O-C(R^{10})_2$ -,  $-S$ -,  $-S-C(R^{10})_2$ -,  $-NR^{PR}$ - or  $-NR^{PR}-C(R^{10})_2$ -, or one or both of  $R^8$  or  $R^9$  independently are absent, leaving a 5-membered ring;

$R^{13}$  independently are  $C_{1-6}$  alkyl;

$R^{PR}$  independently are  $-H$  or a protecting group;

D is a heterocycle or a 4-, 5-, 6- or 7-membered ring that comprises saturated carbon atoms, wherein 1, 2 or 3 ring carbon atoms of the 4-, 5-, 6- or 7-membered ring are optionally independently substituted with  $-O$ -,  $-S$ - or  $-NR^{PR}$ - or where 1, 2 or 3 hydrogen atoms of the heterocycle or where 1, 2 or 3 hydrogen atoms of the 4-, 5-, 6- or 7-membered ring are substituted with  $-OR^{PR}$ -,  $-SR^{PR}$ -,  $N(R^{PR})_2$ -,  $-O-Si(R^{13})_3$ -,  $-CHO$ -,  $-CHS$ -,  $-CH=NH$ -,  $-CN$ -,  $-SCN$ -,  $-NO_2$ -, an ester, a thioester, a phosphoester, a phosphothioester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, a halogen, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer, or,

one more of the ring carbons are substituted with =O, =S, =N-OH, =CH<sub>2</sub>, or a spiro ring, or

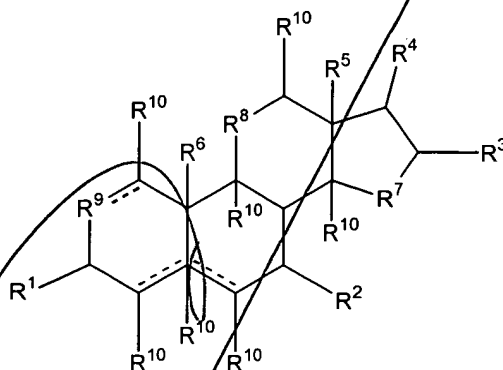
D comprises two 5- or 6-membered rings, wherein the rings are fused or are linked by 1 or 2 bonds.

5 56. The method of claim 55 wherein the condition is a lipid disorder.

57. The method of claim 56 wherein the lipid disorder is elevated cholesterol, elevated triglyceride or elevated low-density lipoprotein.

58. The method of claim 56 wherein the condition is arteriosclerosis.

59. The method of claim 55 wherein the compound has the formula



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B1  
contd

wherein, R<sup>4</sup> is -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, a thioacyl group, a carbonate, a carbamate, a thioacetal, an alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer.

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60. The method of claim 59 wherein

R<sup>7</sup> is -CH<sub>2</sub>- or -CH<sub>2</sub>-CH<sub>2</sub>-;

R<sup>8</sup> is -CH<sub>2</sub>- or -O-;

R<sup>9</sup> is -CH<sub>2</sub>-, -CH(OH)-, -O- or -CH(halogen)-;

$R^{10}$  at the 1, 4, 5, 6, 9, 12 or 14 position is  $-OH$ ,  $-OR^{PR}$ ,  $=O$ ,  $-SH$ ,  $-SR^{PR}$ ,  $=S$ ,  $=N-OH$ ,  $-N(R^{PR})_2$ ,  $-O-Si-(R^{13})_3$ ,  $-CHO$ ,  $-CHS$ ,  $=CH_2$ ,  $=CH(CH_2)_{0-15}CH_3$ ,  $-CH=NH$ ,  $-CN$ ,  $-SCN$ ,  $-NO_2$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide, a polymer, a ketal or a thioketal and the remaining  $R^{10}$  are  $-H$ .

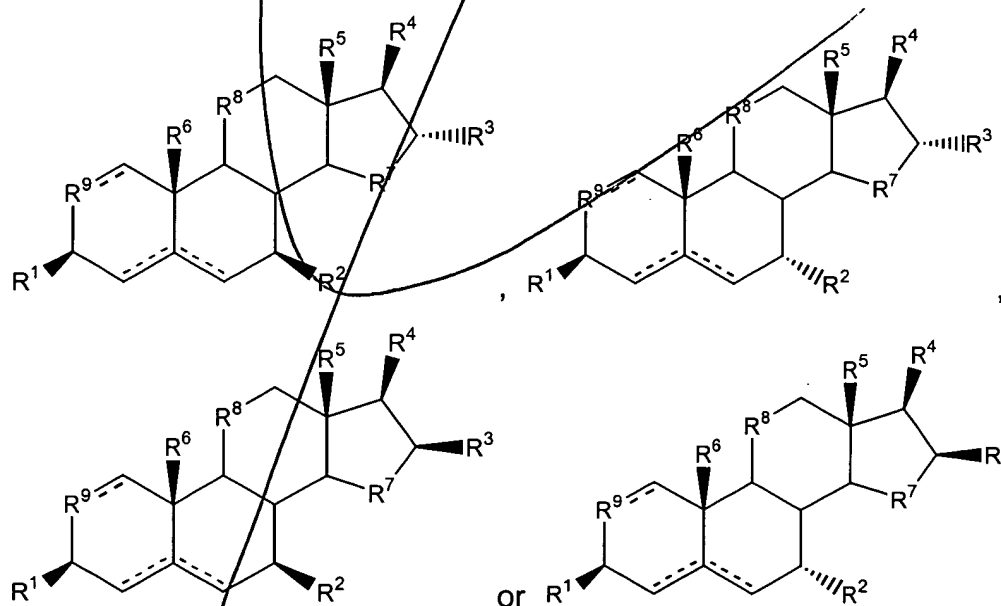
61. The method of claim 60 wherein the  $R^{10}$  is at the 1 position.

62. The method of claim 61 wherein the  $R^{10}$  is  $-OH$ ,  $=O$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, an ether or an amino acid.

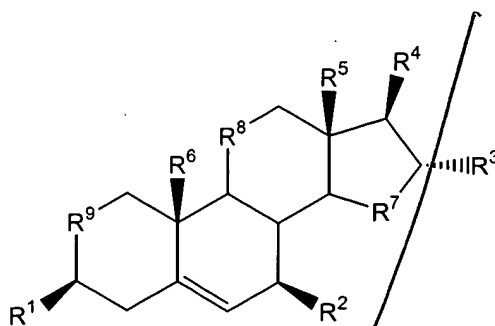
63. The method of claim 60 wherein the  $R^{10}$  is at the 12 position.

64. The method of claim 61 wherein the  $R^{10}$  is  $-OH$ ,  $=O$ ,  $-F$ ,  $-Cl$ ,  $-Br$ ,  $-I$ , an ester, an ether, a carbonate or an amino acid.

65. The method of claim 55 wherein the compound has the formula



66. The method of claim 65 wherein the compound has the formula



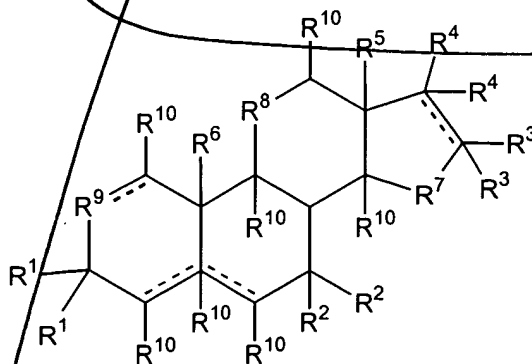
67. The method of claim 66 wherein  $R^2$  is  $-\text{OH}$ ,  $-\text{OR}^{\text{PR}}$ ,  $-\text{SH}$ ,  $-\text{SR}^{\text{PR}}$ ,  $-\text{N}(\text{R}^{\text{PR}})_2$ ,  $-\text{CHO}$ ,  $-\text{CHS}$ ,  $-\text{CN}$ ,  $-\text{SCN}$ ,  $-\text{NO}_2$ ,  $-\text{F}$ ,  $-\text{Cl}$ ,  $-\text{Br}$ ,  $-\text{I}$ , an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, a substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety or an optionally substituted heterocycle.

68. The method of claim 67 wherein the cardiovascular condition is a lipid disorder.

69. The method of claim 68 wherein the lipid disorder is elevated cholesterol.

70. The method of claim 69 wherein  $R^1$ ,  $R^2$  and  $R^4$  are  $-\text{OH}$ ,  $R^3$  is  $-\text{H}$ ,  $R^5$  and  $R^6$  are  $-\text{CH}_3$ ,  $R^7$ ,  $R^8$  and  $R^9$  are  $-\text{CH}_2-$  and hydrogen atoms at the 8, 9 and 14 positions respectively are in the  $\beta, \alpha, \alpha$  configuration.

71. A method to treat or ameliorate neutropenia in a subject having or susceptible to developing neutropenia comprising administering to the subject an effective amount of a compound having the formula



20 wherein,

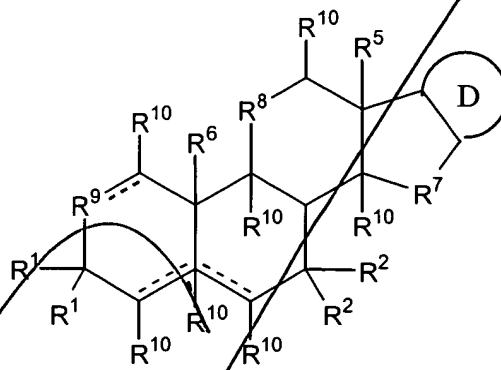
$R^1$  independently are -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, =CH<sub>2</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer;

$R^2$  independently are -OH, -OR<sup>PR</sup>, =O, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -CHO, -CHS, =CH<sub>2</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety or an optionally substituted heterocycle;

$R^3$  independently are -H, -OH, -OR<sup>PR</sup>, =O, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, =CH<sub>2</sub>, =CH(CH<sub>2</sub>)<sub>0-15</sub>CH<sub>3</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle or a spiro ring;

each  $R^4$  independently are -H, -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a

carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide,  
 5 an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer, or all  $R^3$  and  $R^4$  together comprise a compound having the formula



$R^5$  and  $R^6$  independently are -H, -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group or an optionally substituted alkynyl group;

$R^{10}$  independently are -H, -OH, -OR<sup>PR</sup>, =O, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, =CH<sub>2</sub>, =CH(CH<sub>2</sub>)<sub>0-15</sub>CH<sub>3</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide,  
 25 a nucleoside, a nucleotide, an oligonucleotide, a polymer, or,



one or more of two adjacent  $R^1$ - $R^6$  and  $R^{10}$  comprise an independently selected ketal or thioetal;

$R^7$  is  $-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2-C(R^{10})_2$ -,  $-C(R^{10})_2-O-C(R^{10})_2$ -,  $-C(R^{10})_2-S-C(R^{10})_2$ -,  $-C(R^{10})_2-NR^{PR}-C(R^{10})_2$ -,  $-O$ -,  $-O-C(R^{10})_2$ -,  $-S$ -,  $-S-$   
 5  $C(R^{10})_2$ -,  $-NR^{PR}$ - or  $-NR^{PR}-C(R^{10})_2$ ;

$R^8$  and  $R^9$  independently are  $-C(R^{10})_2$ -,  $-C(R^{10})_2-C(R^{10})_2$ -,  $-O$ -,  $-O-C(R^{10})_2$ -,  $-S$ -,  $-S-C(R^{10})_2$ -,  $-NR^{PR}$ - or  $-NR^{PR}-C(R^{10})_2$ -, or one or both of  $R^8$  or  $R^9$  independently are absent, leaving a 5-membered ring;

$R^{13}$  independently are  $C_{1-6}$  alkyl;

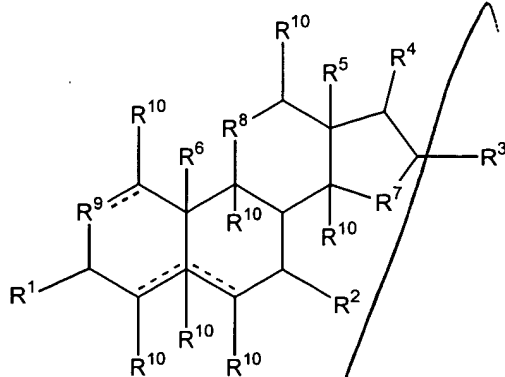
10  $R^{PR}$  independently are  $-H$  or a protecting group;

D is a heterocycle or a 4-, 5-, 6- or 7-membered ring that comprises saturated carbon atoms, wherein 1, 2 or 3 ring carbon atoms of the 4-, 5-, 6- or 7-membered ring are optionally independently substituted with  $-O$ -,  $-S$ - or  $-NR^{PR}$ - or where 1, 2 or 3 hydrogen atoms of the heterocycle or where 1, 2 or 3 hydrogen  
 15 atoms of the 4-, 5-, 6- or 7-membered ring are substituted with  $-OR^{PR}$ -,  $-SR^{PR}$ -,  $N(R^{PR})_2$ -,  $-O-Si-(R^{13})_3$ -,  $-CHO$ -,  $-CHS$ -,  $-CH=NH$ -,  $-CN$ -,  $-SCN$ -,  $-NO_2$ -, an ester, a thioester, a phosphoester, a phosphothioester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, a halogen, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer, or,

25 one more of the ring carbons are substituted with  $=O$ -,  $=S$ -,  $=N-OH$ -,  $=CH_2$ -, or a spiro ring, or

D comprises two 5- or 6-membered rings, wherein the rings are fused or are linked by 1 or 2 bonds.

72. The method of claim 71 wherein the compound has the formula



wherein,  $R^4$  is -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -OSO<sub>3</sub>H, -OPO<sub>3</sub>H, -F, -Cl, -Br, -I, an ester, a thioester, a phosphoester, a phosphothioester, a phosphonoester, a phosphiniester, a sulfite ester, a sulfate ester, an amide, an amino acid, a peptide, an ether, a thioether, a thioacyl group, a carbonate, a carbamate, a thioacetal, an alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a nucleotide, an oligonucleotide or a polymer.

73. The method of claim 72 wherein

$R^7$  is -CH<sub>2</sub>- or -CH<sub>2</sub>-CH<sub>2</sub>-;

$R^8$  is -CH<sub>2</sub>- or -O-;

$R^9$  is -CH<sub>2</sub>-, -CH(OH)-, -O- or -CH(halogen)-;

$R^{10}$  at the 1, 4, 5, 6, 9, 12 or 14 position is -OH, -OR<sup>PR</sup>, =O, -SH, -SR<sup>PR</sup>, =S, =N-OH, -N(R<sup>PR</sup>)<sub>2</sub>, -O-Si-(R<sup>13</sup>)<sub>3</sub>, -CHO, -CHS, =CH<sub>2</sub>, =CH(CH<sub>2</sub>)<sub>0-15</sub>CH<sub>3</sub>, -CH=NH, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alkynyl group, an optionally substituted aryl moiety, an optionally substituted heteroaryl moiety, an optionally substituted heterocycle, a spiro ring, an optionally substituted monosaccharide, an optionally substituted oligosaccharide, a nucleoside, a

nucleotide, an oligonucleotide, a polymer, a ketal or a thioketal and the remaining  $R^{10}$  are -H.

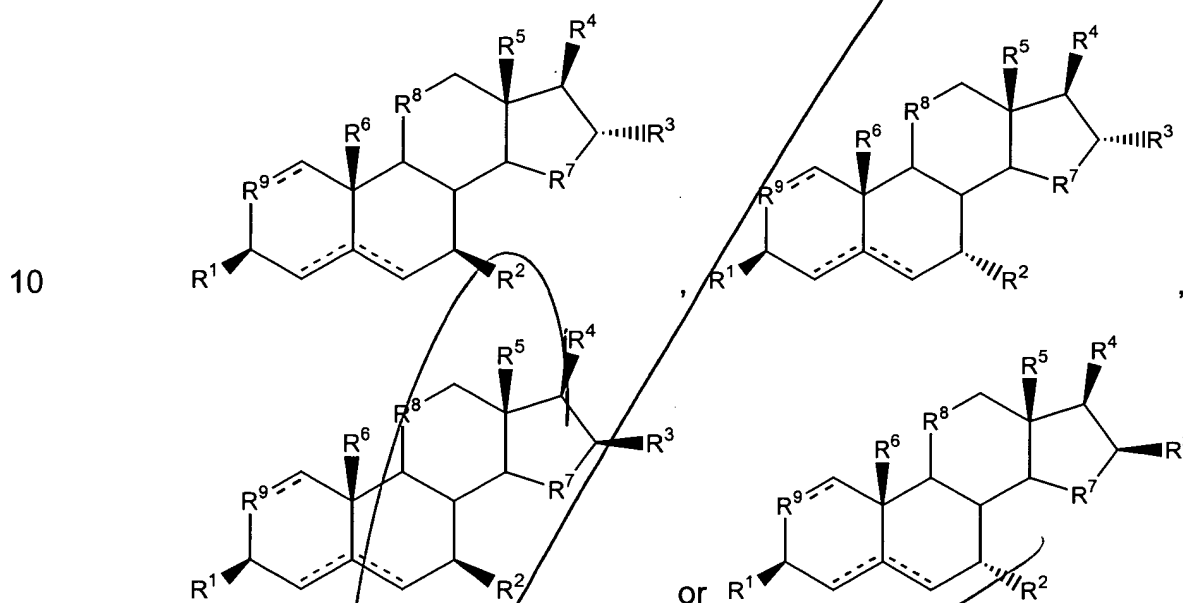
74. The method of claim 73 wherein the  $R^{10}$  is at the 1 or 4 position.

75. The method of claim 74 wherein the  $R^{10}$  is -OH, =O, -F, -Cl, -Br, -I, an ester, an ether or an amino acid.

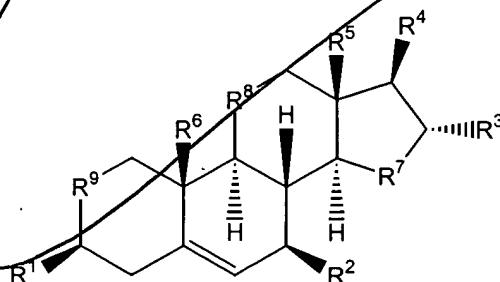
76. The method of claim 73 wherein the  $R^{10}$  is at the 12 position.

77. The method of claim 76 wherein the  $R^{10}$  is -OH, =O, -F, -Cl, -Br, -I, an ester, an ether, a carbonate or an amino acid.

78. The method of claim 72 wherein the compound has the formula



79. The method of claim 78 wherein the compound has the formula



80. The method of claim 79 wherein  $R^2$  is -OH, -OR<sup>PR</sup>, -SH, -SR<sup>PR</sup>, -N(R<sup>PR</sup>)<sub>2</sub>, -CHO, -CHS, -CN, -SCN, -NO<sub>2</sub>, -F, -Cl, -Br, -I, an ester, a thioester, an amide, an amino acid, a peptide, an ether, a thioether, an acyl group, a thioacyl group, a carbonate, a carbamate, a thioacetal, an optionally substituted alkyl

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